CLAIMS

1. An electro-therapeutic device comprising:
first and second electrodes or probes for making electrical contact to the body of an individual,
voltage supplying means for supplying an alternating output voltage across said electrodes to pass an alternating current through the body of the individual, said voltage supply means being adapted for controlling the frequency of the output voltage so that the output voltage frequency is automatically changing in time between a low frequency and a high frequency, said high frequency being higher than said low frequency.

2. A device according to claim 1, wherein the voltage supply means is adapted for controlling the frequency of the output voltage so that the output voltage frequency is changing between a low frequency and a high frequency at regular time intervals.

3. A device according to claim 1 or 2, wherein the voltage supply means is adapted for controlling the frequency of the output voltage so that the output voltage is changing in time between one or more time periods having a low frequency and one or more time periods having a high frequency.

4. A device according to any of the claims 1-3, wherein the low output voltage frequency is in the range of 0.5-10 Hz.

5. A device according to claim 4, wherein the low output voltage frequency is in the range of 1-5 Hz.

6. A device according to claim 5, wherein the low output voltage frequency is about 2 Hz.

7. A device according to any of the claims 1-6, wherein the high output voltage frequency is in the range of 12-50 Hz.

8. A device according to claim 7, wherein the high output voltage frequency is in the range of 15-40 Hz.

9. A device according to claim 8, wherein the high output voltage frequency is about 15 Hz.

10. A device according to any of the claims 1-6, wherein the high output voltage frequency is in the range of 40-300 Hz.

11. A device according to claim 10, wherein the high output voltage frequency is in the range of 60-200 Hz.

12. A device according to claim 11, wherein the high output voltage frequency is in the range of 75-150 Hz.

13. A device according to claim 12, wherein the high output voltage frequency is about 100 Hz.

14. A device according to any of the claims 1-13, wherein the voltage supply means is adapted for controlling the frequency of the output voltage so that the frequency of the output voltage is changed in cycles, each cycle comprising a first time period of low frequency and a second time period of high frequency.

15. A device according to claim 14, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 3-15 seconds.

16. A device according to claim 14, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 4-10 seconds.

17. A device according to claim 14, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 5-6 seconds.

18. A device according to claim 14, wherein a cycle time defined by the total time of the first time period and the second time period is about 6 seconds.

19. A device according to any of the claims 1-18, wherein a time period of low frequency is in the range of 1-6 seconds.

20. A device according to any of the claims 1-18, wherein a time period of low frequency is in the range of 2-4 seconds.

21. A device according to any of the claims 1-18, wherein a time period of low frequency is about 3 seconds.

22. A device according to any of the claims 1-21, wherein a time period of high frequency is in the range of 1-6 seconds.

23. A device according to any of the claims 1-21, wherein a time period of high frequency is in the range of 2-4 seconds.

24. A device according to any of the claims 1-21, wherein a time period of high frequency is about 3 seconds.

25. A device according to any of the claims 1-24, said device further comprising timing means for controlling the alternating output voltage to be applied for a predetermined time period.

26. A device according to any of the claims 1-25, wherein the first electrode is an active electrode for making electrical contact to a selected point of the body of a patient, and the second electrode is a passive electrode for making electrical contact over a relatively large area of the body of the individual when compared to the selected point area.

27. A device according to any of the claims 1-26, said device comprising a casing which is holdable in the hand of an individual, said first electrode being mounted to the casing and said second electrode being disposed on the casing for making electrical contact with the hand of the individual.

28. A device according to claim 27, wherein the casing is elongate and the first electrode is mounted at one end of the casing, being electrically isolated from the body of the casing.

29. A device according to claim 28, wherein at least part of the body of said casing is made of an electrically conducting material and the second electrode is in electrically contact with said electrically conducting part of the body of the casing.

30. A device according to any of the claims 1-29, said device further comprising resistance detecting means for detecting when the first electrode is located at or near a low resistance point on the body of the individual, said resistance detecting means having means for detecting variations in the resistance between the first and second electrodes.

31. A device according to claim 30, said device further comprising means for providing an audible signal representative of the resistance.

32. A device according to claim 31, wherein the means for providing an audible signal is adapted to emit a sound which changes in volume or pitch, the volume or pitch being proportional to or a function of the resistance.

33. A device according to any of the claims 30-32, said device further comprising means for providing a visible signal representative of the resistance.

34. A device according to any of the claims 1-33, said device further comprising means for shifting between a standby mode and an active mode, wherein when in standby mode no alternating output voltage signal is supplied across the first and second electrodes and when in active mode, the alternating output voltage signal is supplied across the first and second electrodes.

35. A device according to claim 34, wherein the means for shifting between the standby mode and the active mode is adapted to control said shifting as a function of current flowing between the first electrode and the second electrode.

36. A device according to claim 35, wherein the mode shifting means is adapted to hold the device in the standby mode when no current is flowing between the first and second electrodes.

37. A device according to claim 35 or 36, wherein the mode shifting means is adapted to hold the device in the active mode when a current larger than or equal to a trigger current is flowing between the first and second electrodes.

38. A device according to claim 37, wherein the mode shifting means comprises a power converter and resistor means, and said trigger current generates a voltage drop across said resistor means whereby the power converter shifts from a standby mode to an active mode.

39. A device according to any of the preceding claims, wherein the voltage supplying means is adapted to supply an alternating output voltage having a voltage swing in the range of 2-10 V, in the range of 3-8 V, in the range of 4-6 V, or about 5 V.

40. A device according to any of the claims 1-38, wherein the voltage supplying means is adapted to supply an alternating output voltage having a voltage swing in the range of 10-50 V, in the range of 12-40 V, in the range of 15-35 V, or about 20 V or about 25 V.

41. A device according to any of the preceding claims, wherein the voltage supplying means is adapted to pass an alternating current through the body of said individual in the range of 0.01-3 mA, or in the range of 0.02-1 mA.

42. A device according to any of the preceding claims, wherein the first and/or second electrodes have a conductive surface comprising a non-oxidising metal.

43. A device according to claim 42, wherein the non-oxidising metal is selected from a group of materials comprising gold, silver and a platinum/chrome coating.

44. A method of applying an electrical stimulation signal to the body of an individual, said method comprising:
providing an electrical stimulation signal comprising an electrical current having an AC component, said AC component being changing in time between a low frequency and a high frequency with said high frequency being higher than said low frequency,
applying said electrical stimulation signal to a selected point of contact on the body of the individual in a manner to pass said electrical current through said selected point of contact on the body.

45. A method of using an electrical stimulation signal for the alleviation of pain of an individual, said method comprising:
providing an electrical stimulation signal in the form of an electrical current having an AC component, said AC component being changing in time between a low frequency and a high frequency with said high frequency being higher than said low frequency,
applying said electrical stimulation signal to a selected point of contact on the body of the individual in a manner to pass said electrical current through said selected point of contact on the body, to thereby provide alleviation from said pain for said individual.

46. A method according to claim 44 or 45, wherein said electrical stimulation signal is applied to the selected point of contact on the body of the individual in a manner to pass said electrical current through a part of the body from said selected point of contact to a reference point or area of the body.

47. A method according to any of the claims 44-46, wherein said electrical stimulation signal is applied to several selected points of contact on the body of the individual.

48. A method according to claim 47, wherein said electrical stimulation signal is applied to one selected point at a time.

49. A method according to any of the claims 44-48, wherein said AC component is changing between a low frequency and a high frequency at regular time intervals.

50. A method according to any of the claims 44-49, wherein said AC component is changing in time between one or more time periods having a low frequency and one or more time periods having a high frequency.

51. A method according to any of claims 44-50, wherein the low frequency is in the range of 0.5-10 Hz.

52. A method according to any of claims 44-51, wherein the low frequency is in the range of 1-5 Hz.

53. A method according to any of claims 44-52, wherein the low frequency is about 2 Hz.

54. A method according to any of claims 44-53, wherein the high frequency is in the range of 12-50 Hz.

55. A method according to any of claims 44-54, wherein the high frequency is in the range of 15-40 Hz.

56. A method according to any of claims 44-55, wherein the high frequency is about 15 Hz.

57. A method according to any of claims 44-52, wherein the high frequency is in the range of 40-300 Hz.

58. A method according to claim 57, wherein the high frequency is in the range of 60-200 Hz.

59. A method according to claim 58, wherein the high frequency is in the range of 75-150 Hz.

60. A method according to claim 59, wherein the high frequency is about 100 Hz.

61. A method according to any of claims 44-60, wherein the frequency of the AC component is changed in cycles, each cycle comprising a first time period of low frequency and a second time period of high frequency.

62. A method according to claim 61, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 3-15 seconds.

63. A method according to claim 61, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 4-10 seconds.

64. A method according to claim 61, wherein a cycle time defined by the total time of the first time period and the second time period is in the range of 5-6 seconds.

65. A method according to claim 61, wherein a cycle time defined by the total time of the first time period and the second time period is about 6 seconds.

66. A method according to any of claims 44-65, wherein a time period of low frequency is in the range of 1-6 seconds.

67. A method according to any of claims 44-65, wherein a time period of low frequency is in the range of 2-4 seconds.

68. A method according to any of claims 44-65, wherein a time period of low frequency is about 3 seconds.

69. A method according to any of claims 44-68, wherein a time period of high frequency is in the range of 1-6 seconds.

70. A method according to any of claims 44-68, wherein a time period of high frequency is in the range of 2-4 seconds.

71. A method according to any of claims 44-68, wherein a time period of high frequency is about 3 seconds.

72. A method according to any of claims 44-71, wherein the electrical stimulation signal is applied to a selected point of contact for a predetermined time period.

73. A method according to any of claims 44-72, wherein the electrical stimulation signal is applied to one or more selected points of contact representing one or more low resistance points of contact on the body of the individual.

74. A method according to any of claims 44-73, said method further comprising locating one or more selected points of contact representing one or more low resistance points of contact on the body of the individual.

75. A method according to any of claims 44-74, wherein said electrical stimulation signal is applied to said point(s) of contact via electrodes or probes.

76. A method according to claim 75, wherein said electrical stimulation signal is applied to said point(s) of contact via first and second electrodes or probes.

77. A method according to claim 76, wherein the first electrode is an active electrode for making electrical contact to a selected point of the body, and the second electrode is a passive electrode for making electrical contact over a relatively large area of the body of the individual when compared to the selected point area.

78. A method according to claim 76 or 77, said method including the use of an electro-therapeutic device selected from the devices of claims 1-43.